

SEQUENCE LISTING

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Sorensen, Robert G.

<120> CANINE VACCINES AGAINST BORDETELLA BRONCHISEPTICA

<130> 16112 (PC25496A)

<140> 60/443,418

<141> 2003-01-29

<160> 3

<170> PatentIn version 3.2

<210> 1

<211> 602

<212> PRT

<213> Bordetella bronchiseptica

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Asn Pro Ala Ala Glu Leu Arg Phe Gln Asn Gly Ser Val Thr Ser Ser
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Gly Gln Leu Phe Asp Glu Gly Val Arg Arg Phe Leu Gly Thr Val Thr
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Val Lys Ala Gly Lys Leu Val Ala Asp His Ala Thr Leu Ala Asn Val
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Ser Asp Thr Arg Asp Asp Asp Gly Ile Ala Leu Tyr Val Ala Gly Glu
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Gln Ala Gln Ala Ser Ile Ala Asp Ser Thr Leu Gln Gly Ala Gly Gly
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Val Arg Val Glu Arg Gly Ala Asn Val Thr Val Gln Arg Ser Thr Ile

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Val Ala Ala Met Asp Gly Ala Ile Val His Leu Gln Arg Ala Thr Ile 210 215 220		
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Pro Glu Pro Val Lys Leu Thr Leu Ala Gly Gly Ala Gln Gly Gln Gly 340 345 350		
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Pro Leu Asp Val Ala Leu Ala Ser Gln Ala Arg Trp Thr Gly Ala Thr
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Arg Ala Val Asp Ser Leu Ser Ile Asp Asn Ala Thr Trp Val Met Thr
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Asp Asn Ser Asn Val Gly Ala Leu Arg Leu Ala Ser Asp Gly Ser Val
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Asp Phe Gln Gln Pro Ala Glu Ala Gly Arg Phe Lys Val Leu Met Val
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Asp Thr Leu Ala Gly Ser Gly Leu Phe Arg Met Asn Val Phe Ala Asp
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Leu Gly Leu Ser Asp Lys Leu Val Val Met Arg Asp Ala Ser Gly Gln
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His Arg Leu Trp Val Arg Asn Ser Gly Ser Glu Pro Ala Ser Ala Asn
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Thr Met Leu Leu Val Gln Thr Pro Arg Gly Ser Ala Ala Thr Phe Thr
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Leu Ala Asn Lys Asp Gly Lys Val Asp Ile Gly Thr Tyr Arg Tyr Arg
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Leu Ala Ala Asn Gly Asn Gly Gln Trp Ser Leu Val Gly Ala Lys Ala
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Gln Arg Gln Pro Glu Ala Pro Ala Pro Gln Pro Pro Ala Gly Arg Glu
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 <213> Bordetella bronchiseptica

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Thr Thr Ile Lys Val Ser Gly Arg Gln Ala Gln Gly Val Leu Leu Glu
35 40 45

Asn Pro Ala Ala Glu Leu Arg Phe Gln Asn Gly Ser Val Thr Ser Ser
50 55 60

Gly Gln Leu Phe Asp Glu Gly Val Arg Arg Phe Leu Gly Thr Val Thr
65 70 75 80

Val Lys Ala Gly Lys Leu Val Ala Asp His Ala Thr Leu Ala Asn Val
85 90 95

Ser Asp Thr Arg Asp Asp Asp Gly Ile Ala Leu Tyr Val Ala Gly Glu
100 105 110

Gln Ala Gln Ala Ser Ile Ala Asp Ser Thr Leu Gln Gly Ala Gly Gly
115 120 125

Val Arg Val Glu Arg Gly Ala Asn Val Thr Val Gln Arg Ser Thr Ile
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Val Asp Gly Gly Leu His Ile Gly Thr Leu Gln Pro Leu Gln Pro Glu
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Asp Leu Pro Pro Ser Arg Val Val Leu Gly Asp Thr Ser Val Thr Ala

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Asp Asn Ser Asn Val Gly Ala Leu Arg Leu Ala Ser Asp Gly Ser Val
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Asp Phe Gln Gln Pro Ala Glu Ala Gly Arg Phe Lys Cys Leu Met Val
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Asp Thr Leu Ala Gly Ser Gly Leu Phe Arg Met Asn Val Ala Phe Ala
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Asp Leu Gly Leu Ser Asp Lys Leu Val Val Met Arg Asp Ala Ser Gly
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Gln His Arg Leu Leu Val Arg Asn Ser Gly Ser Glu Pro Ala Ser Gly
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Asn Thr Met Leu Leu Val Gln Thr Pro Arg Gly Ser Ala Ala Thr Phe
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Thr Leu Ala Asn Lys Asp Gly Lys Val Asp Ile Gly Thr Tyr Arg Tyr
500 505 510

Arg Leu Ala Ala Asn Gly Asn Gly Gln Trp Ser Leu Val Gly Ala Lys
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Ala Pro Pro Ala Pro Lys Pro Ala Pro Gln Pro Gly Pro Gln Pro Gly
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Pro Gln Pro Pro Gln Pro Pro Gln Pro Pro Gln Pro Pro Gln Arg Gln
545 550 555 560

Pro Glu Ala Pro Ala Pro Gln Pro Pro Ala Gly Arg Glu Leu Ser Ala
565 570 575

Ala Ala Asn Ala Ala Val Asn Thr Gly Gly Val Gly Leu Ala Ser Thr
580 585 590

Leu Trp Tyr Ala Glu Ser Asn
595